Appl. No.: 10/607,249 Amdt. Dated: 07/06/05

Reply to Office Action of: 03/08/2005

## **Amendments to the Claims:**

Please replace all prior claims versions and listings with the following:

## Listing of the Claims:

1-73. Cancelled

74. (new) A diesel particulate filter comprising a plugged, wall-flow honeycomb filter body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein:

the filter exhibits a CTE (25-800°C) of less than  $13x10^{-7}$ /°C, a bulk filter density of less than  $0.60 \text{ g/cm}^3$ , a median pore diameter,  $d_{50}$ , of less than 15 micrometers, a porosity and pore size distribution that satisfy the relationship  $P_m \le 3.75$ , wherein  $P_m$  is equal to  $10.2474\{1/[(d_{50})^2(\%\text{porosity}/100)]\} + 0.0366183(d_{90}) - 0.00040119(d_{90})^2 + 0.468815(100/\%\text{porosity})^2 + 0.0297715(d_{50}) + 1.61639(d_{50}-d_{10})/d_{50}$ , wherein  $d_{10}$ , and  $d_{90}$  are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and  $d_{10} < d_{50} < d_{90}$ .

- 75. (new) A diesel particulate filter in accordance with claim 74 wherein the median pore diameter,  $d_{50}$  is less than 12 micrometers.
- 76. (new) A diesel particulate filter comprising a plugged, wall-flow honeycomb filter body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein:

the filter exhibits a CTE (25-800°C) of less than  $13x10^{-7}$ °C, a bulk filter density of less than 0.60 g/cm³, a median pore diameter,  $d_{50}$ , of less than 25 micrometers, a porosity and pore size distribution that satisfy the relationship  $P_m \le 3.75$ , wherein  $P_m$  is equal to  $10.2474\{1/[(d_{50})^2(\%porosity/100)]\} + 0.0366183(d_{90}) - 0.00040119(d_{90})^2 + 0.468815(100/\%porosity)^2 + 0.0297715(d_{50}) + 1.61639(d_{50}-d_{10})/d_{50}$ , wherein  $d_{10}$ , and  $d_{90}$  are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and  $d_{10} < d_{50} < d_{90}$  and wherein  $d_{90}$  is less than 40 micrometers.

- 77. (new) A diesel particulate filter in accordance with claim 76 wherein  $d_{90}$  is less than 30 micrometers.
- 78. (new) A diesel particulate filter in accordance with claim 77 wherein d<sub>90</sub> is less than 20 micrometers.